

Zoellck 1994

## 1994 SURVEYS FOR BULL TROUT IN THE JARBIDGE RIVER

March 16-17, 1994

The US Bureau of Land Management (BLM) sampled 4 sites on the East and West Forks of the Jarbidge River using electrofishing equipment. The survey sites were approximately 100 m long. Species sampled included redband trout, speckled dace, mountain whitefish, mottled sculpin, and bridgelip sucker. We did not find any bull trout. Redband densities ranged from 0.2 to 5.7 fish per 100 m<sup>2</sup>, which was similar to that found in an IDFG survey in 1992.

July 5-8 and 12-14, 1994

The middle portion of the Jarbidge River drainage was surveyed for bull trout in a cooperative effort by the BLM, US Fish and Wildlife Service, and US Forest Service Intermountain Research Station. We visually surveyed by snorkeling 55 pools totalling 1157 m (3795 ft) of stream in the mainstem, East Fork, and West Fork of the Jarbidge river, and tributary streams Dave Creek and Jack Creek (see attached table and map). Pools were selected to survey based on their habitat quality (woody debris or boulder complexes), while spacing the sites to systematically sample BLM managed lands in Idaho and Nevada.

Water temperatures in the mainstem Jarbidge River had already increased to 16 degrees C during the afternoon on July 5 when we started surveying, so we concentrated our sample efforts further up the drainage where water temperatures were more suitable for bull trout. We surveyed 5 pools on the mainstem Jarbidge River, covering approximately the first 1.3 miles downstream of the confluence of the East and West Forks. We sampled 13 pools on the East Fork of the Jarbidge River over approximately 8.5 miles of the stream. On the West Fork Jarbidge, we surveyed 26 pools over a 11 mile length of the stream from the mouth of the stream upstream to the BLM-Forest Service boundary. Additionally, we sampled 11 pools in Dave and Jack Creek.

Water temperatures continued to increase during the two weeks of sampling. Afternoon water temperatures on the East Fork increased from an average of 13.9 degrees C during July 5-8 to 17.2 degrees C during July 12-14. Similarly, water temperatures on the West Fork during the afternoon increased from an average of 14.9 degrees C on July 5-8 to 16.9 degrees C on July 12-14. Average water temperatures for all the sample sites and times of the day are presented in Table 1.

We observed bull trout at two sites: a single bull trout at site 6 on the West Fork of the Jarbidge River, approximately 1.5 miles downstream of the Idaho-Nevada border, and 5 possibly 6 bull trout in Jack Creek at its confluence with the West Fork of the Jarbidge approximately 6 miles upstream of the Idaho-Nevada border.

Native redband trout were by far the most commonly observed fish. Every pool, except for one, contained redbands (see attached table). At least four age classes were observed. The West Fork of the Jarbidge contained 12-13" long rainbow trout, which we assumed to be of hatchery origin due to the tattered fins, similar size, and lack of white leading edges on the posterior fins. Mountain whitefish were also common in the Jarbidge drainage. Adult and juvenile whitefish were present in over half of the pools snorkeled. Other species observed included speckled dace, longnose dace, speckled dace, redband shiner, and sculpins (probably mottled sculpins).

During the surveys, we observed that the road culvert at Jack Creek was replaced within the last year, but is still impassable to fish. Average water velocity in the culvert on July 7, 1994 was approximately 7.8 feet per second. The culvert is 60 feet long and 6 feet in diameter and has a 2.25 foot drop

from the downstream end of the culvert to the plunge pool below. The culvert needs to be replaced or modified to allow migratory bull trout to move up and down Jack Creek.

#### SUMMARY

Migratory bull trout are still present in the Jarbidge River drainage. Our July surveys were conducted when water temperatures in the lower to mid-portions of the Jarbidge drainage were quickly increasing to unsuitable levels for bull trout. The culvert at Jack Creek is still a barrier to fish passage.

# Jarbridge River Study and Tributaries

## Species Identified

### Bull Trout

### Redband

### Rainbow

### Whitefish Adult Juvenile

### Sucker

### Shiner

### Dace Spotted Longnose

### Sculpin

### Site Name

Main Jarbidge #1  
Main Jarbidge #2  
Main Jarbidge #3  
Main Jarbidge #4  
Main Jarbidge #5

East Fork Jarbidge #1  
East Fork Jarbidge #2  
East Fork Jarbidge #3  
East Fork Jarbidge #4  
East Fork Jarbidge #4C  
East Fork Jarbidge #4B  
East Fork Jarbidge #4A  
East Fork Jarbidge #5  
East Fork Jarbidge #6  
East Fork Jarbidge #7  
East Fork Jarbidge #8  
East Fork Jarbidge #9  
East Fork Jarbidge #10A  
East Fork Jarbidge #10B

Dave Creek #1A  
Dave Creek #1B  
Dave Creek #1C  
Dave Creek #1D  
Dave Creek #2A  
Dave Creek #2B  
Dave Creek #2C  
Dave Creek #2D  
Dave Creek #2E  
Dave Creek #2F

Jack Creek #1

West Fork Jarbidge #1  
West Fork Jarbidge #2  
West Fork Jarbidge #2A  
West Fork Jarbidge #3  
West Fork Jarbidge #4  
West Fork Jarbidge #5  
West Fork Jarbidge #5A  
West Fork Jarbidge #6A  
West Fork Jarbidge #6B  
West Fork Jarbidge #6C  
West Fork Jarbidge #7A  
West Fork Jarbidge #7B  
West Fork Jarbidge #7C  
West Fork Jarbidge #8  
West Fork Jarbidge #9  
West Fork Jarbidge #10A  
West Fork Jarbidge #10B  
West Fork Jarbidge #10C  
West Fork Jarbidge #10D  
West Fork Jarbidge #11  
West Fork Jarbidge #12A  
West Fork Jarbidge #12B  
West Fork Jarbidge #13  
West Fork Jarbidge #14A  
West Fork Jarbidge #14B  
West Fork Jarbidge #15  
West Fork Jarbidge #16  
West Fork Jarbidge #17  
West Fork Jarbidge #18

Site Name	Bull Trout	Redband	Rainbow	Whitefish Adult Juvenile	Sucker	Shiner	Dace Spotted Longnose	Sculpin
Main Jarbidge #1				X	X	X	X	X
Main Jarbidge #2	X			X	X	X	X	
Main Jarbidge #3	X			X	X	X	X	
Main Jarbidge #4	X			X	X	X	X	
Main Jarbidge #5	X			X	X	X	X	
East Fork Jarbidge #1				X	X		X	X
East Fork Jarbidge #2	X			X	X		X	X
East Fork Jarbidge #3	X			X	X		X	X
East Fork Jarbidge #4	X			X	X	X	X	X
East Fork Jarbidge #4C	X			X	X		X	
East Fork Jarbidge #4B	X			X	X		X	
East Fork Jarbidge #4A	X			X	X		X	
East Fork Jarbidge #5	X			X	X		X	
East Fork Jarbidge #6	X			X	X		X	
East Fork Jarbidge #7	X			X	X		X	
East Fork Jarbidge #8	X			X	X		X	
East Fork Jarbidge #9	X			X	X		X	
East Fork Jarbidge #10A	X			X	X		X	
East Fork Jarbidge #10B	X			X	X		X	
Dave Creek #1A	X							
Dave Creek #1B	X							
Dave Creek #1C	X							
Dave Creek #1D	X							
Dave Creek #2A	X							
Dave Creek #2B	X							
Dave Creek #2C	X							
Dave Creek #2D	X							
Dave Creek #2E	X							
Dave Creek #2F	X							
Jack Creek #1	X			X			X	X
West Fork Jarbidge #1				X			X	X
West Fork Jarbidge #2	X		X	X			X	X
West Fork Jarbidge #2A	X		X	X			X	X
West Fork Jarbidge #3	X		X	X			X	X
West Fork Jarbidge #4	X		X	X	X		X	X
West Fork Jarbidge #5	X		X	X	X		X	X
West Fork Jarbidge #5A	X		X	X	X		X	X
West Fork Jarbidge #6A	X		X	X	X		X	X
West Fork Jarbidge #6B	X		X	X	X		X	X
West Fork Jarbidge #6C	X		X	X	X		X	X
West Fork Jarbidge #7A	X		X	X	X		X	X
West Fork Jarbidge #7B	X		X	X	X		X	X
West Fork Jarbidge #7C	X		X	X	X		X	X
West Fork Jarbidge #8	X		X	X	X		X	X
West Fork Jarbidge #9	X		X	X	X		X	X
West Fork Jarbidge #10A	X		X	X	X		X	X
West Fork Jarbidge #10B	X		X	X	X		X	X
West Fork Jarbidge #10C	X		X	X	X		X	X
West Fork Jarbidge #10D	X		X	X	X		X	X
West Fork Jarbidge #11	X		X	X	X		X	X
West Fork Jarbidge #12A	X		X	X	X		X	X
West Fork Jarbidge #12B	X		X	X	X		X	X
West Fork Jarbidge #13	X		X	X	X		X	X
West Fork Jarbidge #14A	X		X	X	X		X	X
West Fork Jarbidge #14B	X		X	X	X		X	X
West Fork Jarbidge #15	X		X	X	X		X	X
West Fork Jarbidge #16	X		X	X	X		X	X
West Fork Jarbidge #17	X		X	X	X		X	X
West Fork Jarbidge #18	X		X	X	X		X	X

# 1994 Bull Trout Survey Sites

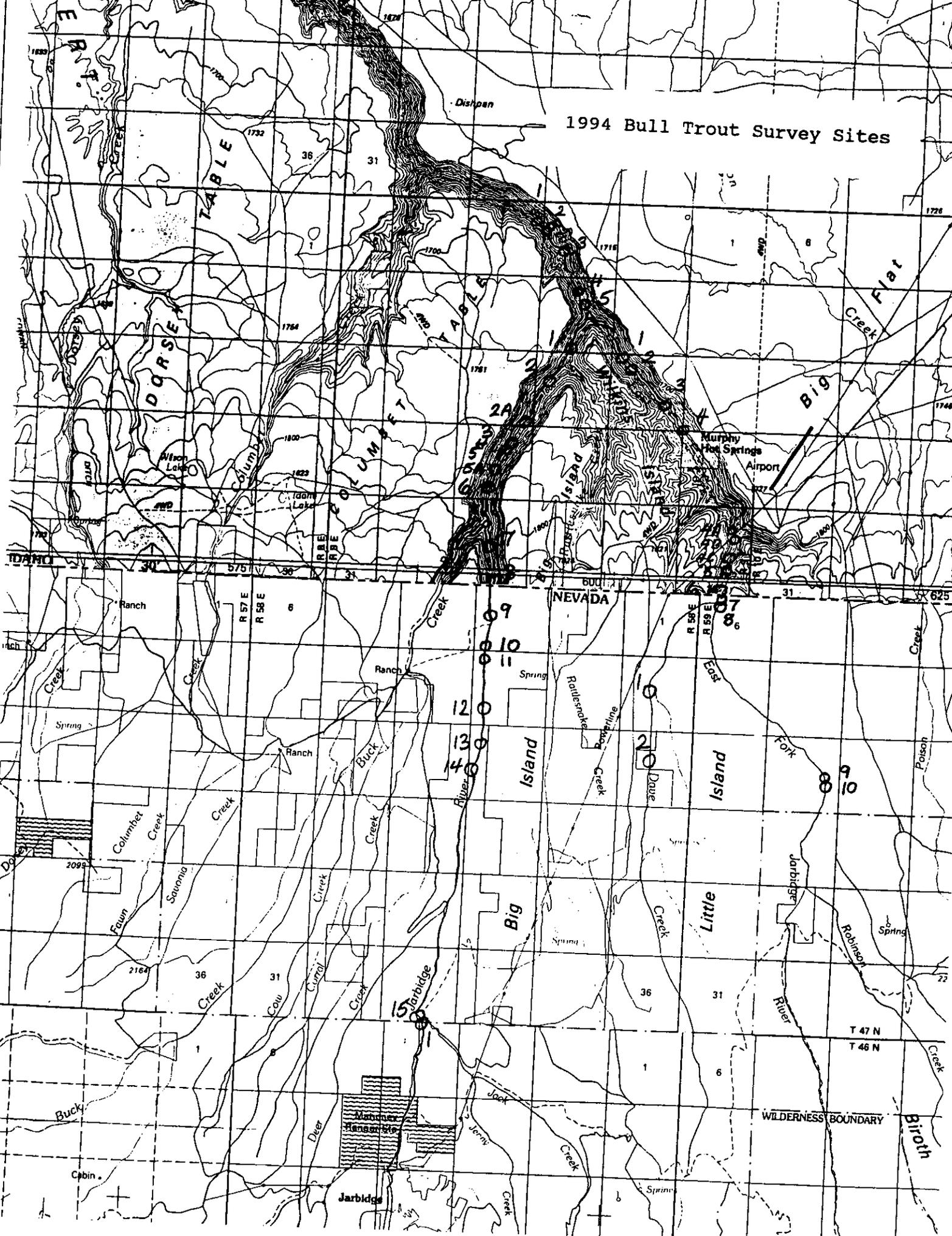


Table 1. Lengths of stream sampled, average pool widths, and average water temperatures of pools surveyed for bull trout in the Jarbidge River drainage, July 5-12, 1994.

Stream	Total Length Sampled		Average Pool Width		Average Water Temperature	
	Feet	Meters	Feet	Meters	°F	°C
Jarbidge River	652	199	42.3	12.9	56.8	13.8
East Fork Jarbidge	1094	334	28.7	8.7	56.8	13.8
West Fork Jarbidge	1820	555	24.2	7.4	56.7	13.8
Dave Creek	214	65	7.1	2.2	48.5	9.2
Jack Creek	15	5	13.1	4.0	57.0 <sup>1</sup>	13.9

<sup>1</sup>The temperature in Jack Creek was measured only on July 12, 1994 at 6:18 PM, when the water temperature in the West Fork was 65 degrees F.